REMARKS

The Examiner indicated that they did not receive a first page of the signed Declaration and Power of Attorney filed June 8, 2005 with the Response to Notification of Missing Requirements. Applicants enclose a copy of the signed Declaration (2 pages) for the Examiner's convenience.

Claim Objections

The Examiner objected to claim 4 for reciting "a gene expressibly encoding the background antigen." Applicants have amended this claim to refer to "a gene encoding the background antigen in an expressible manner."

The Examiner objected to claim 19 for reciting a transgenic animal "that expressibly comprises a gene encoding a baculovirus membrane protein gp64." This claim has been amended to recite a transgenic mouse "that comprises a gene encoding a baculovirus membrane protein gp64."

These amendments clarify that the gene encodes an antigen (claim 4) or protein (claim 19) that can be expressed in the transgenic mouse.

Drawings

The description of Figure 4 on page 24 of the specification has been amended to include a description of the identification number 30, 34 and 46 in the figure. These numbers are not reference numbers for drawing elements. Rather, they refer to lines of transgenic mice. No new matter has been added.

Rejections Under 35 U.S.C. §1212, first paragraph

The Examiner rejected to claims 4-9 and 19 as allegedly not enabled. The Examiner argues, citing Houdebine et al., that the art of making transgenic animals other than transgenic mice is highly unpredictable. The Examiner also argues, citing Sigmund and Larmere et al., that

the art of making transgenic mice is unpredictable because the phenotype of a mouse transgenic for a given gene is unpredictable.

Applicants have amended the claims to specify transgenic mice rather than transgenic animals. It is Applicants' position that the claims as amended are enabled. The presently claimed mice contain a transgene encoding a background antigen. Thus, rather than expressing the transgene so as to create a particular complex phenotype, the transgenic mice need only express as much of the antigen as required to induce immunotolerance. In fact, a similar result can commonly be achieved by administering a desired antigen to the mouse at the fetal stage or shortly after birth. Moreover, it is a simple matter to screen transgenic mice to identify those expressing the background antigen and having immunotolerance to the background antigen. Those skilled in the art are capable of carrying out such screening without undue experimentation. Thus, the present transgenic mice differ substantially from those that are the focus of Sigmund. For example, Sigmund discusses the impact of genetic background on phenotypes as complex as ethanol tolerance, locomoter activity, atherosclerosis and renal development (see Table one page 1426). The present claims do not involve such complex phenotypes. Moreover, Sigmund describes specific methods for reduceing phenotypic variation.

The Examiner noted that Larmere et al. state that 129 and C57BL/6 mouse strains can "display significant and sometimes extreme phenotypic differences." However, Larmere et al.'s comments were in the context of transgenic mice used to study pain and analgesia. The phenotypes discussed by Larmere et al. relate to nociception, hypersensitivity and analgesia, all of which are complex phenotypes completely unrelated to the transgenic mice of the present claims. Moreover, Larmere et al. acknowledge that the problem of differences between 129 and C57BL/6 stains can be minimized by using inbred strains.

The Examiner also cited Leiter as evidence that transgenic mice have phenotypic variability based on differences in genetic background. However, these transgenic mice discussed by Leiter are for investigation of Type I diabetes or Type II diabetes. This is a far more complex phenotype than the expression required to induce immunotolerance. Moreover, Leiter discusses approaches for reducing the impact of genetic background on phenotype.

Finally, the Examiner stated that promoter and enhancer elements used in transgenes might not function in all species. However, the present claims are limited to transgenic mice. The promoters and expression control elements that work in mice are well understood and widely used by those of ordinary skill in the art.

In view of the foregoing, Applicants request that these rejections under 35 U.S.C. §112 be withdrawn.

Rejections Under 35 U.S.C. §102(a)

The Examiner rejected claims 4, 5 and 7-9 as anticipated by Tsuchiya (Therapeutic Antibody Presentation, 2003).

Enclosed is a verified translation of the priority application (Japanese Patent Appln. No. 2002-164834) from which the present application claims priority. This priority application supports the present claims, which are entitled to the 2002 priority date of the priority application. In view of the forgoing, Applicants respectfully requires that the Examiner withdraw the rejections under 35 U.S.C. §102(a).

Rejections Under 35 U.S.C. §102(b)

The Examiner rejected claims 4, 5 and 9 as anticipated by Mancini et al. (1993).

Claim 4 has been amended to recite that the immunogen administered to the transgenic mouse is a "budding virus particle or part thereof." Mancini et al. does not teach or suggest an immunogen. Instead, Mancini et al. teaches hepatitis B surface antigen as an immunogen. In view of the forgoing, Applicants respectfully request that the rejection under 35 U.S.C. §102(b) be withdrawn.

Conclusion

In view of the forgoing, it is believed that the claims are in condition for allowance.

Enclosed is a Petition for Extension of Time with the appropriate fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 24 OCT 2006

Anita L. Meiklejohn, Ph.D.
Reg. No. 35,283

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

21458849.doc